

I, Alexander Zinchuk, residing at 340 East 74<sup>th</sup> Street,  
New York, New York 10021 declare that:

I am proficient in the English and German languages.

I have carefully made the attached translation from the  
International Preliminary Examination Report, issued in  
International Application No. PCT /EP2004/013104 written  
in the German language;

The attached translation is a true and correct English  
version of such original, to the best of my knowledge and belief.

I further declare that all statements made herein on my  
own knowledge are true and that all statements made on the  
information and belief are believed to be true; and further that  
these statements were made with the knowledge that willful false  
statements and the like so made are punishable by fine or  
imprisonment, or both under Section 1001 of Title 18 of the  
*United States Code* and that such willful false statements may  
jeopardize the validity of the application or any registration  
resulting therefrom.

Alexander Zinchuk

Alexander Zinchuk

Dated: March 30, 2006

10/576556

IAP15 Rec'd PCT/PTO 18 APR 2006

PCT/EP2004/013104

AFS: 207,450

**APPLICANT:**

MARKUS GÜMPPEL, et al.

**SERIAL NO.:**

PCT/EP2004/013104

**FILED:**

Concurrently

**FOR:**

METHOD AND DEVICE FOR PRELOADING  
TAPERED ROLLER BEARING OF A ROLLING  
MILL ROLL

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

### I. Basis of the Report

This report has been drawn on the basis of (substitute sheets which have been furnished to the receiving Office in response to invitation under Article 14 are referred in this report as "originally filed" and are not annexed to the report since they do not contain amendments):

### Description, pages

1-5 as originally filed

### Claims, Nos.

2-9 as originally filed

1 received on May 6, 2005 with a letter of May 4, 2005

PCT/EP2004/013104 ✓

**Drawings, Sheet**

1/1 as originally filed

**V. Reasoned Statement under Article 35(2) with Regard to Novelty,  
Inventive Step and Industrial Applicability; citations and explanation  
supporting such statement.**

**1. Statement**

Novelty	Claims 3-9	Yes
	Claims 1-2	No
Inventive Step	Claims 4-9	Yes
	Claims 1-3	No
Industrial Applicability	Claims 1-9	Yes

**2. Citation and Explanations (Rule 70.7)**

See attachment

**Attachment**

**To § 5**

1. In the following Action reference will be made to the following documents:

**D1** : US 4 341 426 A (CLAPP ET AL) 27. Juli 1982 (1982-07-27)

**D2** : EP 0 425 072 A (THE TIMKEN COMPANY) 2. Mai 1991  
(1991-05-02)

2. **Independent Claim 1:**

2.1 The present application does not meet the requirements of Article 33(1) PCT because the subject matter of claim 1 is not new within the spirit of Article 33(2)PCT.

Document **D2** discloses a:

Method of preloading a tapered roller bearing (B) secured with a conical seat on a tapering roll neck (4) of a roll (2), in particular, a back-up roll, arranged in a roll stand by means of a chock (C), by application of a hydraulic pressure (88, 90) thereto, wherein the bearing inner ring (32), rollers, (36) and the bearing outer ring (34) are subjected to pressure produced during rolling and are radially preloaded against the roll (2).

3. **Dependent Claims 2, 3:**

**Claims 2, 3** contain no features that, in combination with features of any claim they depend on, would meet the requirements of PCT with regard to novelty or inventive step:

3.1 **Claim 2 : D2** (column 8, lines 23-27) discloses that the tapered roller bearing is preloaded with a pre-set hydraulic pressure.

3.2 **Claim 3 :** The additional features of this claim provide, with reference to **D1 or D2** no additional or unforeseen technical effect. Document **D2** (column 7, lines 50-54) discloses control of the hydraulic pressure. ✓

4. **Independent Claim 4 :**

4.1 Document **D2** is viewed as representing the closest prior art for the subject matter of **claim 4**. The subject matter of independent **claim 4** distinguishes from **D2** in that the pressure-applying device is supported on the roll by an axial bearing provided on the roll end neck.

Thus, the subject matter of **claim 4** is new (Article 33(2) PCT).

4.2 In the **claim 4** of the present application, the solution proposed for achieving the object of the invention is based on the inventive step (Article 33(3) PCT) for following reasons:

The further features of **claim 4** permit to eliminate the tension rods and insure a vibration-free running of the bearing during operation.

The object of the present invention is to improve the construction disclosed in **D2** and to enable a vibration-free support.

This object is achieved in that the bearing preload is effected, according to characterized clause of **claim 4** with an annular pressure-applying device that is supported by an axial bearing provided on the roll end neck.

**D2** discloses preloading of tapered roller bearing with tension rods or with a cylinder supported against a plate connected with the frame, and that the chock is preloaded against the roll, together with the bearing.

A support by an axial bearing on the roll end neck is not disclosed or suggested in **D2**.

5. Claims 5-9 depend on claim 4 and thus likewise meet the PCT requirements with regard to novelty and inventive step.
6. The subject matter of claims **1 through 9** is undoubtedly industrially applicable (Article 33(4) PCT).